'Neonatal Crash Course': Quality Improvement in Regional Neonatal Teaching For Paediatric Trainees

LONDON PAEDIATRICS

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Background

- In 2022-2023, only 4.3% 375 foundation posts contained a neonatal rotation [1]
- Paediatric trainees enter their first neonatal rotation without previous neonatal experience [1]
- A virtual 'Neonatal Crash Course' was delivered to to paediatric trainees during the COVID-19 pandemic, with help from the London School of Paediatrics, with over 200 attendees.
- From pre- and post-course questionnaires, mean confidence scores across all the topics covered (including ventilation, haemodynamics, neuroprotection, and nutrition), significantly improved by 27.7-58.1% (p<0.0001) [2].
- Following the online pilot's success, we secured Health Education England funding to deliver a face-to-face version of the course.

Aim

To improve junior paediatric trainees' confidence in practical neonatal skills through a face-to-face workshop.

Methods

- We held a face-to-face regional neonatal workshop for ST1 London paediatric trainees at St George's Advanced Patient Simulation Centre (GAPS) shortly after their training commenced
- Trainees rotated through 8 interactive workshops: ventilation, less-invasive surfactant administration (LISA), full-term and pre-term simulation scenarios, longline insertion, parenteral nutrition (PN), cranial ultrasound (CRUSS), and cerebral function monitoring (CFM)
- Trainees rated their confidence from 1 (not confident) to 5 (very confident) in the range of neonatal skills covered, directly or indirectly, during the workshops, via pre- and post-course questionnaires.
- A two-tailed unpaired t-test on Microsoft Excel was used to compare the mean trainee confidence score for each skill pre- and post-course.

Results

- Of 32 trainees, 31 (96.9%) and 29 (90.6%) completed the pre- and post-course questionnaires respectively
- **Figure 1** demonstrates a bar chart, comparing the the mean trainee confidence scores before and after attending our face-to-face 'Neonatal Crash Course'
- Across all the skills covered, mean confidence scores pre- and post-course increased significantly by 94-201% (p<0.001).
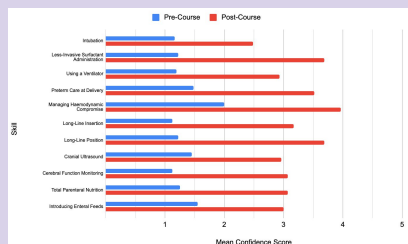- **Figure 2** demonstrates a 'word cloud' from the written feedback provided by trainees post-course

Figure 1

Figure 2

Conclusion

We have demonstrated that face-to-face workshop-based neonatal education can significantly improve confidence in trainees new to neonatology. We plan to longitudinally follow-up our attendees' confidence scores over the course of their first training year, with a view to integrating our workshop into the LSP regional teaching programme on a 6-12 monthly basis.

**Neonatal Crash Course Faculty
(image taken with consent)**

References

1. United Kingdom Foundation Programme; Foundation Programme (UKFP); UK Foundation Programme; 2022; Accessed: Dec 2022; Available: https://foundationprogramme.nhs.uk/programmes/2-year-foundation-programme/ukfp/

2. Aghababaie A, Downes A. 'Virtual neonatal crash course': quality improvement in neonatal teaching for paediatric trainees. Postgrad Med J. 2023 Jul 21;99(1174):934-940

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